

Work Order ID 79588***79588***

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January-27-12 3:29:46 PM

Item ID: D6101-005 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Saddle Billet
Start Date: 27/01/2012 Start Qty: 50.00 ***50*** Cust Item ID:
Required Date: 10/02/2012 Req'd Qty: 50.00 ***50*** Customer:
Reference:

Approvals: Process Plan: MLJ Date: 12/01/27 Tooling: Date: Run Start ***NR1***
QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr								
D6101	Rev B								

100 PURCHASING 0.00

100

Purchasing

Memo

0.00

Purchasing

Issue P/O: 16017

a) Description: Aluminum billet

b) 5.00" x 8.250" x 2.50" thick

c) Tolerance on all dimensions are +0.030"/-0.000"

d) Grain direction along 5.00" length

e) Material: 7075-T7351 (QQ-A-250/12)

f) Material certification required

12-01-30
50

110 Receive & Inspect for Damage & Mat'l Certs 0.00

110

Packaging

Memo

0.00

Packaging

Ensure material certification is attached

12/2/10
50

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: Supplier NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
12/02/14	120	2 billet not on the right grain direction file supplier	CP 12.02.21 DS/02	→ contact supplier of issue AND buying a Refund Attach email to WLC	CP 12/02/16	WHL 12.02.16	CP 12.02.21 DS/042	S 12/02/14

NOTE: Date & initial all entries

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Start Date: 27/01/2012 Start Qty: 50.00 ***50*** Cust Item ID:
Required Date: 10/02/2012 Req'd Qty: 50.00 ***50*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

120

QC6- Inspect dimensions to drawing

0.00

120

QC

Memo

0.00

Quality Control

Ensure Material certification comply to Dwg D6101

*on 12/02/14**48**2**~~1~~*

130

Identify as per dwg & Stock Location: *MAT 41*

0.00

130

Packaging

Memo

0.00

Packaging

*on 12/02/14**48**1*

140

QC21- Final Inspection - Work Order Release

0.00

140

QC

Memo

0.00

Quality Control

*12/2/15**12-02-14*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

January-27-12 3:29:50 PM

Page 1

Work Order ID: 79588

79588

Parent Item: D6101-005

D6101-005

Parent Item Name: Saddle Billet

Start Date: 27/01/2012

Required Date: 10/02/2012

Start Qty: 50.00

Required Qty: 50.00

Comments: IPP A: 01.05.04New IssueC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-005P		Purchased	No			110	Each	0.0000	1	50			
D6101-005P									**				
7075-T7351 8.25X5.0X2.5													

12/2/10 *(50)*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

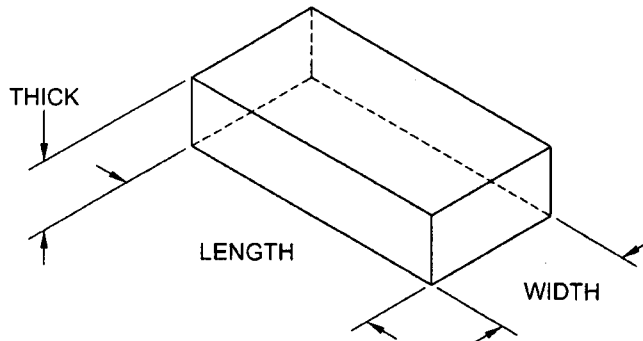
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

SPECIFICATION CONTROL DRAWING



SPECIFICATION
 CONTROL DRAWING
 UNCONTROLLED COPY
 SUBJECT TO CHANGE
 WITHOUT NOTICE
 WORK ORDER
 NO. 795-88
MLJ
 12/01/27

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.030/-0.000), AND GRAIN DIRECTION AS SHOWN.

TOLERANCES ON ALL DIMENSIONS ARE +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

B ACCEPTABLE SPECIFICATIONS FOR 7075-T7351 ALUMINUM ARE AMS-QQ-A-250/12, QQ-A-250/12, OR ASTM B209

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6101-001	7075-T7351 (QQ-A-250/12)	6.000	6.250	2.000	Along 6.000 Length
D6101-003	7075-T7351 (QQ-A-250/12)	7.875	6.250	2.000	Along 7.875 Length
D6101-005	7075-T7351 (QQ-A-250/12)	5.000	8.250	2.500	Along 5.000 Length
D6101-007	7075-T7351 (QQ-A-250/12)	7.750	8.250	2.500	Along 7.750 Length
D6101-009	7075-T7351 (QQ-A-250/12)	8.700	8.250	2.500	Along 8.700 Length
D6101-011	7075-T7351 (QQ-A-250/12)	9.700	8.250	2.500	Along 9.700 Length
D6101-013	7075-T7351 (QQ-A-250/12)	10.100	8.250	2.500	Along 10.10 Length
D6101-015	7075-T7351 (QQ-A-250/12)	9.450	6.250	2.500	Along 9.450 Length
D6101-017	7075-T7351 (QQ-A-250/12)	6.350	6.250	2.250	Along 6.350 Length

RELEASED
 09/07/15/WB

B	ADDED D6101-015/-017, ADD ASTM B209	RF	09.04.23
A	NEW ISSUE	CP	01.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D6101	SHEET 1 OF 1
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	SADDLE BILLET, 7075	NTS
DATE	09.04.23	COPYRIGHT © 2001 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**Castle Metals®**

A. M. Castle & Co.

COPIE**BORDEREAU DE MARCHANDISES**

Page 1 of 2

No de Formulaire d'Emballage / Pack Slip No:929061

Expédié de / Ship From:		Vendu à / Sold To:		Expédié à / Ship To:		Livré à / Deliver To:	
A. M. Castle & Co. Connecticut - Ext 12 Cascade Boulevard Orange, CT 06477		A. M. Castle & Co. (Canada) Inc. DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		WILL CALL-MONTREAL 835 SELKIRK AVENUE POINTE CLAIRE, QC H9R 3S2 CA		A. M. Castle & Co. (Canada) Inc. WILL CALL-MONTREAL 835 SELKIRK AVENUE POINTE CLAIRE, QC H9R 3S2 CA	
Date d'expédition / Date Shipped	F.O.B.	Modalités de transport / Freight Terms		Transporteur / Carrier	No du Bon de connaissance / BOL No	N° de livraison / Delivery No	
07-FEB-2012	ORIGIN	Prepaid		CASTLE_NETWORK K	934178	117338696	

Détails d'expédition / Shipment Details	Destination finale / Final Destination Branch -
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N° de commande / Order No		N° de ligne Line No	N° d'article / Item No	Description	
1975455		1	752241.MO	2.5000.PL.7075.T7351.ALUMINUM.US1.48.5000.144.5000 CUT 2SIDED TO 8.25 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 5")) X 5 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 5")) - ALUMINUM PLATE SAW SPECIFICATIONS: QQ-A-250/12	
N° de bon de commande / Purchase Order No		Nbre de pièces / Part Number		Qté commandée / Ordered Qty	Qté Facturée / Invoice Qty
16017		YOUR ITEM NUMBER: D6101-005		50.00 PCS	50 PCS

Détails / Details						
Usine / Mill	No de coulee / Heat Number	Code mec / Mech Id	Pièces / PCS	Largeur (Pouce)/ Width (IN)	Longueur (Pouce)/ Length (IN)	Qté expédiée / Shipped Qty (LBS)
	424168A3		10			106.66
	424168A3		8			85.32
	424168A3		30			319.97
	424168A3		2			21.33

Nous certifions par la présente que le matériel couvert par cette certification est conforme aux spécifications susmentionnées et aux exigences applicables pour le matériel, y compris toute spécification faisant partie de la description. Les rapports d'essai sont archivés pour fins de consultation. Toute requête concernant du matériel défectueux sera rejetée à moins qu'elle ne soit faite par écrit à A. M. Castle & Co. dans les 60 jours suivant la livraison. Le matériel coupé sur mesure ou coupé par le client ne peut être retourné pour crédit.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

10 February 2012 14:20:20 PM



Castle Metals®

A. M. Castle & Co.

BORDEREAU DE MARCHANDISES

Page 2 of 2

Ce matériel a été reçu et inspecté par Reviewed by Authorized Castle Metals Representative:		Date:	Name:
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SHIP TO:

CASTLE METALS AEROSPACE
15 EXECUTIVE BLVD.
ORANGE, CT 06477

KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215

Phone: (800) 367-2586

SOLD TO:

CASTLE METALS AEROSPACE
ATTN: ACCOUNTS PAYABLE DEPT.
970 W. 190TH STREET
SUITE 700
TORRANCE, CA 90502

CERTIFIED TEST REPORT

Serial Number

4126435

CUSTOMER PO NUMBER: 00144215		WORK PACKAGE:	CUSTOMER PART NUMBER: 152500X48.57L145.75		SHIP RUN/LOAD ID: 101258/15	GOV'T CONTRACT NUMBER:
KAISER ORDER NO: 1064974	LINE ITEM: 1	SHIP DATE: 8-APR-2008	ALLOY: 7075	CLAD: BARE	TEMPER: T7351	PRODUCT DESCRIPTION: MILL FINISH PLATE
WEIGHT SHIPPED: 7230 LB	QUANTITY: 4 PCS EST.	B/L NUMBER: 2017258	GAUGE: 2.5000 IN		WIDTH: 48.500 IN	LENGTH: 145.750 IN

Certified Specifications

AMS 4078/RevG
ASTM B 209/Rev07
BSS 7055/RevA
GSS16100/RevG
PS 21211/RevK

AMS-QQ-A-250/12
ASTM B 594/Rev06
CSTI 006/RevC
MIL-STD-2154

AMS-STD-2154
BAC 5439/RevH
DPS 4.713/RevAH
MMS 159/RevN

Test Code: 4297

Test Results

Lot: 424168A3 Cast 159

Drop 86

Ingot 2

(ASTM E8/B557)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	72.6 : 73.6 (501 : 507)	62.1 : 63.0 (428 : 434)	10.4 : 10.7

(ASTM E1004)

Conductivity %IACS :	40.3 Min	40.7 Max
(MS/M) :	23.4 Min	23.6 Max

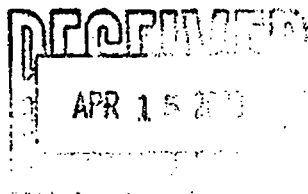
(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.09	0.21	1.4	0.02	2.5	0.19	5.5	0.03	0.01	0.01	TOT 0.03

ALLOY LIMITS

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075 MIN	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder





Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4126435

TEST NOTES

Metal represented by this test report was Immersion
ultrasonically tested from one side and meets the Class A
and Class B requirements of all specifications referenced
on this test report.

CERTIFICATION

KAISER ALUMINUM FABRICATED PRODUCTS, LLC (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED IN THE U.S.A OR CANADA AND MANUFACTURED IN THE U.S.A. AND HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT-TREATED COMPLIES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS ARE ON FILE, SUBJECT TO EXAMINATION. TEST REPORTS SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF ALUMINUM FABRICATED PRODUCTS, LLC LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULANT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. ISO-9001:2000 CERTIFIED

BILL POYNOR, LABORATORIES SUPERVISOR

Chantal Lavoie

From: Desbiens, Marc <mdesbien@amcastle.com>
Sent: February 15, 2012 8:14 AM
To: Chantal Lavoie
Subject: RE: info

Hi Chantal,

For PO # 16108, D6101-005, I changed the price to \$ 57.95 pce to cover the difference

Thanks

From: Chantal Lavoie [<mailto:clavoie@dartaero.com>]
Sent: Tuesday, February 14, 2012 3:28 PM
To: Desbiens, Marc
Cc: Brigitte Golden
Subject: info

Hi Marc,

We have rec'd D6101-005 on p/o: 16017, but 2 billet are cut on the wrong side. Could you please exchange them or issue a credit for them.

Thanks

Chantal

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries